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# SCIENTIFIC NOTE

## AIRCRAFT-MEDIATED MOSQUITO TRANSPORT: NEW DIRECT EVIDENCE

ROGER ERITJA,[1] HELENA DA CUNHA RAMOS[2] AND CARLES ARANDA[1]

ABSTRACT. A case is reported of a capture of an *Aedes taeniorhynchus* female mosquito in an aircraft cabin as it attempted to bloodfeed on one of the authors during a transoceanic flight from the USA to the Iberian Peninsula.

**KEY WORDS** Aircraft, transportation, *Aedes taeniorhynchus,* in-flight capture

The risk of accidental spread of vectors by commercial aircraft is rising because of a strong increase in the speed and frequency of flights (Russell 1989). Species of medical importance are habitually found in planes (Evans et al. 1963, Le Maitre and Chadee 1983, Isaäcson 1989). The associated diseases may then affect people in the vicinity of the destination airport if a particular insect was infected; the most widely studied case is airport malaria (Isaäcson 1989). Additionally, the mosquito fauna of some countries can suffer dramatic changes caused by species introduction through air traffic (Ward 1984).

Whereas most of the published information refers to collection campaigns carried out in aircraft after landing, we report here an in-flight mosquito capture. On October 25, 1997, one of the authors (R. E.) was traveling back to Barcelona from New York on a journey including a 1-h stopover at Lisbon. After that stop, 30 min before reaching Barcelona, 2 mosquitoes were sighted in the cabin, one of them biting the arm of the author. Only this female was captured, as the other individual flew away and disappeared under the adjacent seat row. Indeed, there are estimates of only 10% efficiency in capturing mosquitoes in the cabin as a result of the abundance of shelters allowing escape from inspectors (Miller 1943 in Evans et al. 1963).

The individual was transferred to the collections of the Instituto de Higiene e Medicina Tropical at Lisbon, where it was determined by one of the authors (H. da C. R.) as *Aedes (Ochlerotatus) taeniorhynchus* Wied., 1821. This species is referred to by Carpenter and LaCasse (1974) as a "persistent biter and will attack any time of the day or night." (p. 240) It is found in salt marshes and coastal swamps along the whole North American Atlantic coast but is especially abundant in the southern United States and the Caribbean region. The species was recorded by Le Maitre and Chadee (1983) on planes traveling from Venezuela to Trinidad and in baggage departments as well as in passenger cabins of aircraft landing at Florida and New Orleans airports (Evans et al. 1963).

None of the recent species introductions to Europe, *Ae. albopictus* to Albania (Adhami and Reiter 1998) and Italy (Dalla Pozza and Majori 1992) and *Ae. atropalpus* to Italy (Romi et al. 1997), has been mediated by aircraft. However, the availability of adequate breeding places around the destination airports, the insect resistance to climatic conditions on the aircraft, and the lack of in-flight disinfection routines, especially in nonendemic areas, raises the likelihood of such events.

[1] Servei de Control de Mosquits, Consell Comarcal del Baix Llobregat, Parc Torreblanca, 08980 Sant Feliu de Llobregat, Spain.

[2] Instituto de Higiene e Medicina Tropical, Universidade Nova da Lisboa, Rua da Junqueira 96, 1300 Lisboa, Portugal.

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